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AUTHOR Banta, Trudy W.; And Others
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ABSTRACT

The Child Health and Development Project (CHDP), a home-based early intervention program operated in six East Tennessee counties, provides well-child clinics, developmental evaluation, individualized early childhood education for disadvantaged children, and training in parenting skills for their parents. The University of Tennessee's Bureau of Educational Research evaluated CHDP services through a six month treatment-comparison group study, record reviews for clients served 18 months, assessment of public opinion in counties served, and measures of staff morale and effectiveness of project management. Analyses of covariance performed on data derived from pre- and post-treatment measures demonstrated that six months of the CHDP intervention produced significant differences favoring the treatment group in IQ, communication skills, and diet. Parents reported that the program increased their understanding of child development and enabled them to teach and manage the behavior of their children more effectively. (Author/MP)

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EVALUATION

OF

EAST TENNESSEE'S

CHILD HEALTH AND DEVELOPMENT PROJECT

Trudy W. Banta
(Evaluation Director)
University of Tennessee
Knoxville

Linda Higginbotham
(Graduate Research Assistant)
Appalachia Educational Laboratory
Charleston, West Virginia

Muriel Levin
(Graduate Research Assistant)
University of Tennessee
Knoxville, Tennessee

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Trudy W. Banta, University of Tennessee, Knoxville

Linda Higginbotham, Appalachia Educational Laboratory, Charleston West Virginia

Muriel Levin, University of Tennessee, Knoxville

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EVALUATION OF EAST TENNESSEE'S CHILD HEALTH AND DEVELOPMENT PROJECT

Trudy W. Banta
Associate Professor
Bureau of Educational Research and Service
University of Tennessee
Knoxville

Linda Higginbotham

Muriel Levin

PROJECT DESCRIPTION

The Child Health and Development Project (CHDP) is a home-based early intervention program which promotes parenting skills and attempts to facilitate the physical, social, and intellectual development of disadvantaged children from birth through six years of age. The CHDP is a program of the Tennessee Department of Public Health, and was initiated in 1973 with a five-year grant from the Appalachian Regional Commission (ARC). As ARC funds were being phased out in 1977 additional funding for the Project was obtained from Title XX of the Social Security Act, and by 1978 this constituted the sole funding source.

The theoretical base for the CHDP evolved from research performed during the late 1960s by Dr. Susan Gray at George Peabody College for Teachers in Nashville, Tennessee. Gray's work at the Demonstration and Research Center for Early Education (DARCEE) revealed that working with the parent(s) in the home can have a significant impact on each child and on the family system. Accordingly, the philosophy of the CHDP is that the parent is the child's first and most important teacher in the first few years of life; therefore, working through the parents is the most effective means of developing a sustained change in the child's environment.

The clients served by the CHDP are children from birth through six years of age who are in need of child development services and reside in one of six rural counties in East Tennessee: Claiborne, Cocke, Grainger, Monroe, Morgan, or Scott. Within each county served by a Project team, children and their families must be declared eligible for the Project on the basis of Title XX guidelines, i.e., the family must be receiving SSI or AFDC aid or have a limited income and demonstrated need for the program. "Need" may be based on one or more of these conditions: low infant hematocrit, existence of chronic parasites, mental illness, poor housing, truancy in older children, etc. During 1978 the CHDP served an average of 825 families and 1344 children each month.

The CHDP utilizes a multidisciplinary team approach including at least one nurse, social worker, home educator, and secretary at each Project site. Each CHDP team works cooperatively to provide for its clients (1) well-child care clinics, including vision and hearing screening and nutrition counseling; (2) developmental evaluation (using the Denver Developmental Screening Test); (3) individualized early education for each Project child during home visits; (4) needed referrals to appropriate social service agencies; and (5) parent education.

Well-child care is provided during weekly clinics according to Child Health Standards of Tennessee, Tennessee Department of Public Health (1976). Clinic services include physical assessments, immunizations, TB skin tests, parasite screening, and health counseling. The Project nutritionist attends at least one clinic at each team site a month and provides counseling at that time as well as during home visits. Group experiences are provided for children and parents. A psychologist consults with each team and may accompany team members on home visits.

Each team member, upon employment by the CHDP, undergoes three weeks of intensive pre-service training provided by the Training Team of the Division of Maternal and Child Health, Tennessee Department of Public Health, Nashville. This training is a modification of the Training Program for Home Intervention which was developed in 1974 by DARCEE at Peabody College in Nashville. In addition, each nurse receives one month of training provided by the local health department. Continuous in-service training on a variety of relevant topics, including a one hour presentation by the Project nutritionist, is also provided on a bi-monthly basis.

Seven Project teams working in six counties are supervised by a team centrally located in Knoxville. The supervisory team is composed of a director, administrator, nutritionist, nursing supervisor, social services supervisor, two early education supervisors, and secretaries.

The primary goal of the CHDP is to promote the physical, social, and intellectual health of client children through a program of comprehensive child health and development services and parent education. This goal is implemented through seven principal objectives:

1. To provide well-child care for each Project child (according to Child Health Standards of Tennessee, Tennessee Department of Public Health).

2. To prevent minor developmental delays from becoming later handicaps through early detection and intervention.

3. To provide an in-home early education program for each Project child.

   (Note that objectives 1-3 are child-oriented. Objectives 4-7 are parent-oriented.)

4. To enhance the parent's role as the child's first and most important teacher through promoting a healthy parent-child interaction.

5. To promote preventive health care through parent education.

6. To decrease the social isolation of Project families.

7. To serve as an advocate on behalf of Project families with individuals, groups, and organizations in the community.

THE EVALUATION PLAN

In 1976 personnel from the Bureau of Educational Research and Service (BERS) at the University of Tennessee, Knoxville were asked to undertake a program

evaluation of the CHDP. Working closely with the CHDP supervisory team, BERS staff developed a set of specific, measurable objectives for each of the seven general Project objectives. These objectives were of two types: process and terminal. Process objectives were related to the delivery of services, i.e., was the service actually performed, in the manner or to the extent specified? Terminal objectives described outcomes which might be expected if related process objectives were achieved.

Due to funding limitations, the evaluation contract did not go into effect until September 1, 1977, and then only for a period of nine months. In order to obtain evaluative data for each objective, the following procedures were utilized:

1) A review was conducted of the Project records of 20 children (five children at each of four Project sites) who had been CHDP clients for approximately 18 months. Parents of children at each site were interviewed individually by the team secretary using the "Parent Questionnaire" designed by the evaluators.

2) A treatment-comparison group study was conducted with 37 children between the ages of two and four years who were new to the CHDP. Twenty children were identified for the comparison group in Monroe County, where Project services were just being introduced at the time this phase of the evaluation began. Seventeen children for the treatment group were identified in five counties in which the CHDP was well established. Demographic characteristics for families in treatment and comparison counties were quite similar: all were white and poor, and lived in a rural or small-town environment in Appalachia.

   Children in the treatment group received six months of Project services. Children in the comparison group received no services during the same six months period, but were promised CHDP services at the end of the evaluation. Both groups were given the Alpern-Boll Developmental Profile (Alpern and Boll, 1972) before and after the six months treatment period, and the parent of each child gave a 24-hour diet recall for the child and participated in teaching the child a contrived task which was observed and assessed by the evaluators. Following the six months of CHDP services the Parent Questionnaire was administered orally to parents of children in the treatment group, and the Project records for these children were reviewed and evaluated.

3) In order to evaluate the management component of the CHDP:

   a) an instrument entitled "Opinionaire for Team Members" was administered to team members at each Project site, and

   b) a questionnaire entitled "Community Survey for the Child Health and Development Project" was mailed to a stratified random sample of citizens in counties served by the Project.

REVIEW OF PROJECT RECORDS

Health Records

The evaluators reviewed the Project records of (1) 20 children who had been CHDP clients for approximately 18 months (CHDP staff specified 18 months as the

minimum time required for Project services to produce real changes in clients and their families.) and (2) the 17 treatment group subjects who had received Project services for six months.

The following statements summarize major findings from the review of Project Health Records:

- 95% of all Health Records reviewed (19 of 20 eighteen-month Records, and 16 of 17 six-month Records) showed that the Project children had received the required number of detailed nursing visits.
- all children served for 18 months had had all required immunizations; only 47% of those served for 6 months had received all immunizations required at their respective ages.
- 100% of the Project children who needed vitamins and iron supplements had received them.
- 78% of the Health Records reviewed (75% of the 18-month Records and 82% of the 6-month Records) showed that the client's hematocrit had been raised to the recommended level of 34-35.
- 86% of the children (95% in CHDP 18 months and 76% in CHDP 6 months) had received parasite screening. All children who needed treatment for eliminating parasitic infection received treatment.
- 100% of the children in the Project 18 months had received a skin test for tuberculosis, as had 82% of those in the Project for 6 months. No child needed treatment for tuberculosis.
- 76% of the children (60% of those served 18 months, 94% of those served 6 months) had received appropriate vision screening while in the Project.
- 85% of the children in the Project for 18 months and 65% of those served for 6 months had had their hearing tested according to Child Health Standards.
- all children who had problems with vision, hearing, ears, nose, or throat that the CHDP nurse could not treat were referred to a physician or other appropriate source.
- 85% of the 18-month Health Records, and 71% of the 6-month Records were considered by the evaluators to be adequately maintained.

Developmental Screening

As part of the effort to diagnose developmental delays each CHDP home visitor is required to administer the Denver Developmental Screening Test to each of her/his clients once every six months. Nineteen (95%) of the 20 children whose records were reviewed after 18 months of services had had the Denver at six-month intervals. All of the 17 treatment subjects had received the Denver during their six months of services.

Unfortunately, the Denver provides only a gross measure of development: not one of the 20 children who were subjects of the 18-month record review was found to have developmental deficiencies as measured by the Denver. In the group of 17 treatment children, only two registered delays on the Denver: one was grossly retarded and the other had marked speech problems. In both cases the records showed that home visitors were making concentrated efforts to encourage the parents to work with the child in the areas of developmental delay.

Service Plan-Home Visit Forms

Each of the 37 records reviewed contained one or more Service Plans outlining an educational plan for the subject based on her/his developmental needs and the parent's teaching/managing skills. Each set of records contained several Home Visit Forms which included plans for introducing age-appropriate learning activities during the visit with child and parent.

Sixty percent of the 18-month set of records and 76 percent of the 6-month set contained narrative evidence, provided by the home visitor, that parents' management and teaching skills had improved during the period of CHDP services. However, when the earliest home-visitor assessment of 'Behavior Management' skills on the "Educational Needs Assessment" (ENA) for the 18-month subjects was compared with the latest rating on the "Assessment of Parenting and Educational Needs" (APEN), improvement had occurred in only 42 percent of the cases. A t test for related measures showed no significant difference between pre- and post-intervention means on the 'Teaching Style' scale of the ENA and APEN. There was some evidence that instrument unreliability rather than lack of Project impact was responsible for the small number of significant increases which occurred when ratings on these instruments were compared.

Parent Opinion

The evaluators designed a "Parent Questionnaire" to sample parent opinion concerning progress toward meeting CHDP goals. The questionnaire was administered orally to 19 of the 20 parents whose children were subjects of the 18-month record review, and to the parents of the six-month treatment subjects.

Overall, parent reaction to the in-home education program provided by the CHDP was quite favorable. All except one of the parents whose child's records were reviewed said the Project had helped them give their child 'more things to play with and learn from'. More than 80 percent of the parents of both 18-month and 6-month treatment groups felt they could 'handle the teaching' of their child 'better than before the Project started'. All parents said they were glad to be in the Project, that it had given them all they had expected from it, and that they would recommend the Project to other parents.

When asked what they liked most about the Project approximately 70 percent of the parents mentioned the home visits, with the toys and learning activities brought by the home visitor to increase learning opportunities for their child, as the greatest benefit of Project participation. Parent comments revealed their recognition that the Project intervention had enhanced their own teaching skills.

Most parents were enjoying their child more as a result of Project intervention; this effect apparently increased with exposure to Project services

because parents associated with the Project for 18 months expressed substantially more favorable attitudes than did those in the Project for only 6 months.

An increase in parent confidence in the ability to teach their own child was indicated in three responses:

a) 89% of the 18-month parents and 71% of the 6-month parents felt the Project had helped them 'take better care of' their child,

b) 95% of the 18-month parents and 76% of the 6-month group said the Project had given them 'a stronger feeling' that they were their child's 'first and most important teacher', and

c) almost all parents questioned believed the Project had helped them give their child 'more things to play with and learn from'.

Parents felt they were receiving information about child development:

a) 34 of 36 parent respondents expressed the opinion that the CHDP had helped them 'know more about' what their child 'should be learning at different ages', and

b) 33 of 36 parent respondents said the Project had helped them 'learn about the way children learn and grow'.

It was difficult to tell from reading Home Visit Forms if the home visitor was actually promoting the parent's teaching ability or just working with the child during the visits. A Parent Questionnaire response made it quite evident that the home visitor was having an impact on both parent and child, i.e., all parents said the home visitor explained learning activities in such a way that parents could do the activities with the child after the visitor had gone.

Parents appeared to be more involved in the education of their own children as a result of the CHDP intervention. Approximately 85 percent of all parents interviewed said they 'spent more time now' teaching their child than they spent prior to the intervention. Parents of children served by the CHDP for 18 months said they spent an average of two hours each day teaching their child; parents of the 6-months treatment group reportedly spent an average of one hour.

Parent promotion of the development of language usage skills seemed to increase as the length of intervention increased: 84 percent of the 18-month parents and 47 percent of the 6-month parents said they were talking more to their child now than they were prior to the CHDP intervention.

In general, parents believed in the importance of CHDP services: 100 percent of the parents interviewed felt the Project would help their child 'do better' in school.

According to Project records, approximately 80 percent of the 37 families involved in the record reviews had problems which warranted referral to other agencies for additional services not provided by the CHDP. With one exception, every family that needed help was referred to an appropriate agency; and all but two (both in the 6-month treatment group) had been to the agency at the time their records were reviewed. The CHDP has established an outstanding record of making appropriate referrals and assisting client families to take advantage of them.

SIX-MONTH TREATMENT-COMPARISON GROUP STUDY

Design of the Comparative Study

In an evaluation the most convincing evidence of a program's effectiveness is derived from a design in which a group of subjects receiving treatment is compared on a number of measures acquired both before and after treatment with a comparison group that receives no treatment during the same period of time. Statistical procedures may be used to control for the effects of factors other than the treatment which may have an effect on the performance of the treatment and comparison groups, thus strengthing the conclusion that any difference between performance of the two groups at the end of the study is due to the treatment and not to other factors.

Selection of Subjects

An attempt was made to implement a treatment-comparison group study as part of the CHDP evaluation. The BERS evaluation staff established a goal of obtaining 25 children for a treatment group and 25 children for the comparison group. The treatment subjects were to be newly recruited, Project-eligible males and females between the ages of 2 and 4 years in counties where the CHDP had been in operation for at least 18 months. These counties included Grainger, Cocke, Morgan, Scott, and Claiborne. Children for the comparison group were to be newly recruited, Project-eligible males and females between the ages of 2 and 4 years in Monroe County, an area in which the CHDP was just beginning at the time this phase of the evaluation got underway. Children for the comparison group were recruited in Monroe County in order to minimize the possibility that their families would come in contact with families being served by the Project and thus acquire "contaminating" knowledge of Project services.

Since age and sex are such important determinants of early childhood development, an attempt was made to balance the treatment and comparison groups with respect to these two variables. This limitation and others imposed by circumstances prevented the evaluators from reaching their initial goal of obtaining 25 children for both treatment and comparison groups. At the conclusion of the study the treatment group consisted of 17 children, 13 boys and 4 girls; and the comparison group contained 20 children, 14 boys and 6 girls. Neither treatment nor comparison group contained clients who were considered "high risk," but in every other way the candidates for the evaluation were obtained by random selection from the clients available in the 2- to 4-year-old range.

Measurement Instruments

Pre-treatment measures were obtained on treatment and comparison subjects during early 1978. Treatment group children then received six months of CHDP services while comparison subjects had no services. Post-treatment measures were obtained during the fall of 1978.

In order to provide measures of the broadest possible range of CHDP services, the following data were collected from both treatment and comparison subjects:

1) scores on the five scales of the Alpern-Boll Developmental Profile i.e., Physical Age, Self-help Age, Social Age, Academic Age, and Communication Age.

2) a diet history score (based on two 24-hour recalls spaced approximately one week apart).

3) a score on "Observation of Teaching Task" and an accompanying parent interview (designed to assess parenting skills).

4) scores on a "Parent Questionnaire" (for parents of treatment group only).

5) review of Project records for the treatment group in order to determine the extent to which Project objectives had been attained.

The Developmental Profile was developed in 1972 by Gerald D. Alpern and Thomas J. Boll to assess the developmental level of children between the ages of birth and pre-adolescence (approximately 12 years of age) in five areas: Physical Age, Self-Help Age, Social Age, Academic Age (which is easily converted to IQ), and Communication Age. The Developmental Profile Manual (1972) provides the following description of the scales.

> The inventory provides an individual profile which depicts a child's developmental-age level functioning by classifying his particular skills according to age norms in five areas briefly described below:
>
> Physical Age - This scale measures the child's physical development by determining his abilities with tasks requiring large and small muscle coordination, strength, stamina, flexibility, and sequential control skills.
>
> Self-Help Age - This scale measures children's abilities to cope independently with the environment and measures the child's skills with such socialization tasks as eating, dressing, and working. This scale evaluates the degree to which children are capable of responsibly caring for themselves and others.
>
> Social Age - This scale measures the child's interpersonal relationship abilities. The child's emotional needs for people, as well as his manner in relating to

friends, relatives, and various adults exemplify the skills which measure the child's functioning in the social situation.

Academic Age - This scale measures the child's intellectual abilities by evaluating, at pre-school levels, the development of skills prerequisite to scholastic functioning and, at the school age levels, actual academic achievements.

Communication Age - This scale measures the child's expressive and receptive communication skills with both verbal and non-verbal languages. The child's use and understanding of spoken, written, and gesture languages are evaluated by this scale (p. 1).

Each scale of the Profile contains questions designed to measure development at half-year intervals from birth to 3½ years, and at yearly intervals from 4 to 12. The scales yield scores in months of development. In many instances the examiner is able to test the child's ability to perform a certain developmental task at the time of the examination. For other items that are not readily observable (ability to play at a friend's home without being watched constantly, for example) the examiner must ask the parent to respond to questions about the child's behavior. The Developmental Profile scales have face validity, but only the Academic Scale has been the subject of correlational studies designed to establish validity. Concurrent validity has been established by virtue of a significant correlation of .84 obtained between the Binet Mental Age and Academic Age. The Manual supports a claim for high inter-rater and test-retest reliability on the basis of a study in which there was no difference between two sets of Profile scores obtained by two raters two or three days apart.

The diet history score for the evaluation was obtained by asking the parent to recall what the child had eaten within the past 24 hours. Two of these 24-hour recalls were obtained for each child in the treatment and comparison groups so that one score might serve as a check on the other. The two scores thus obtained were averaged, and the mean score was used in the analysis.

The "Observation of Teaching Task" (OTT) and accompanying parent interview were designed by the Project staff in consultation with Dr. Donald Dickenson, a Professor in the training program for school psychologists within the Department of Educational Psychology at the University of Tennessee, Knoxville. Several instruments which purport to measure parent-child interaction or parenting skills were reviewed, and some of the best items from each of these scales were adapted for use in the OTT and interview. The instrument which was relied upon most heavily in this process was that presently being used by CHDP staff to assess parenting skills, the "Assessment of Parenting and Educational Needs." The OTT and interview were field tested by the BERS evaluation staff and those members of the CHDP staff who would later assist in the testing of treatment and comparison subjects. Staff from Project sites brought in children who had already been served by the CHDP to participate in the field trial. As a result of pre-testing, some items were deleted, and others underwent substantial changes in wording. Inter-observer agreement during the field trial was acceptable.

Administration of Instruments

To obtain scores on the OTT the examiner presented the parent a set of simple materials, and requested that the mother teach the child an age-appropriate activity using the materials. For instance, the parent of a 2 year old was given a handful of balloons and buttons and was instructed to ask the child to sort the materials in two separate piles, one pile of balloons, and one pile of buttons. Parents of children between the ages of 2½ and 3½ were given pictures of objects commonly found in a kitchen, and objects commonly found in a bathroom, and were asked to instruct the child in the task of sorting the objects according to the room in which they belonged. Parents of children who were nearly 4 years of age were given two sets of colored cardboard circles. Each set contained four circles the size of a nickel and four circles the size of a quarter. The parent was instructed to ask the child to sort the circles by size and color. Then the parent was rated by trained observers on items within each of four scales on the OTT: 'Provision for Child's Emotional Needs', 'Behavior Management', 'Use of Language', and 'Teaching Style'. Finally, one of the observers asked the parent another set of items in each of the following categories: 'Behavior Management', 'Use of Language', 'Teaching Style', and 'Organization of Child's Environment'. The total score for each scale was obtained by summing scores obtained for that scale via the OTT and via the interview.

Scores on the Developmental Profile, the diet history, and the Observation of Teaching Task/Interview were obtained for each treatment and each comparison subject prior to the initiation of treatment for the experimental group, and again six months later. Thus two sets of scores were available for each subject. The children were tested in their homes, with one or both parents present, and the data for each subject were obtained by one of three Evaluation Teams. Each Evaluation Team was composed of one member of the CHDP staff and one member of the BERS evaluation staff.

One member of the Evaluation Team read the items and recorded responses on the Developmental Profile, while the second member of the team worked with the child on those items which required the child to demonstrate an ability. Therefore, only one set of scores for the Developmental Profile was obtained for each subject.

During administration of the OTT both members of the Evaluation Team rated the parent on all items. One member of the team then read the interview items to the parent, but both members recorded scores. Thus two scores on the OTT/Interview were obtained for each child in the evaluation study.

One diet history score was obtained at the time of the Evaluation Team's visit, and a second 24-hour recall was obtained by a local CHDP staff member approximately one week before or one week after the visit made by the Evaluation Team. All diet history forms were scored by the CHDP nutrition specialist.

The Parent Questionnaire was designed by the BERS evaluation staff in order to gather feedback on the Project from parents. Each question was directly related to a CHDP objective for which no other good measure of accomplishment was available. During the last home visit made by the Evaluation Team to the home of each child in the treatment group, the member of the BERS evaluation staff read the Parent Questionnaire to the parent and recorded the responses. The instrument was introduced near the end of the

home visit, after all other measures had been obtained, and the CHDP member of the Evaluation Team was asked to leave the home while the parent was questioned. The evaluators hoped that the parent would be more honest if no member of the CHDP staff was present during the interview.

Finally, the file containing Project records for each experimental child was reviewed by the BERS staff member of the Evaluation Team, using the same review form which had been used in June 1978 for the 18-month record reviews. Slightly different criteria for assessing the adequacy of the entries on the record were applied, however, since the CHDP intervention had been underway only six months at the time of the review.

During the home visits by the Evaluation Team the following information about each treatment and comparison subject was obtained from the parent for use in subsequent data analyses:

1) home county
2) age
3) sex
4) family income
5) participant in the WIC program
6) number of older siblings
7) number of younger siblings
8) father's educational level
9) mother's educational level
10) father present in the home or absent
11) number of older children in the household
12) number of younger children in the household
13) birth order of the child

Description of Treatment and Comparison Groups

The treatment group for the CHDP evaluation consisted of 17 individuals, 13 males and 4 females. The comparison group contained 20 individuals, 14 males and 6 females. The two groups were quite similar in chronological age at the time of pre-testing: 34.75 months for the treatment group and 34.90 months for the comparison group.

Family income was recorded in seven categories for the purposes of this study:

(1) Under $4,000 (3) $6,306-$7,788 (5) $9,273-$10,756 (7) Over $12,240

(2) $4,001-$6,305 (4) $7,789-$9,272 (6) $10,757-$12,239

The mean income for families of treatment group children was just slightly higher than that for comparison group families: 1.8 for treatment group and 1.6 for the comparison group. (This means that most responses for both groups were in Category 1:, 'Under $4,000'.) Table 1 presents the percentage of treatment and comparison parents reporting income in each category.

Table 1 Percentage of Treatment and Comparison Group Parents Reporting Income in each of Seven Income Categories

Category	1	2	3	4	5	6	7
Treatment	66	12	12	5	5	0	0
Comparison	65	10	20	5	0	0	0

Comparison group children came from slightly larger families than did children in the treatment group. The mean number of older children in treatment group families was .81. The mean number of older siblings for comparison group children was 1.10. The number of younger siblings for treatment group children was .50, the number of younger siblings for comparison group children was .62. Since some children in the treatment and comparison groups were living in extended family situations, the evaluators took note of the number of older and younger children in the household, including siblings. In this instance the comparison group again exceeded the treatment group in family size: children in the treatment group had 1.06 older children in the household, while comparison group children had 1.57. The treatment group children had .56 younger children in the household and comparison group children had .67 younger children in the household. Both treatment and comparison subjects were more likely to be second in birth order within their family than in any other position: for the treatment group the mean birth order position was 1.81, for the comparison group mean birth order position was 1.90.

Presentation of Data

Developmental Profile

Table 2 presents pre- and post-test scores for treatment and comparison subjects on the Alpern-Boll Developmental Profile. In the table 'X' denotes a pre-test score and 'Y' denotes the post-test score on the same scale.

Table 2. Mean Pre- and Post-Treatment Scores on Five Subscales of the Alpern-Boll Developmental Profile for Treatment and Comparison Subjects

	XPA	YPA	XSH	YSH	XSO	YSO	XAC	YAC	XCA	YCA
Treatment	37.38	47.12	41.38	53.25	38.75	49.25	32.88	44.38	33.62	42.75
Comparison	33.81	42.48	38.76	50.19	37.33	44.57	29.81	36.76	32.67	38.38

NOTE: All scores in months
PA = Physical Age
SH = Self Help
SO = Social Age
AC = Academic Age
CA = Communication Age

X = Pre-Treatment Score
Y = Post-Treatment score

The much-used intelligence quotient can be calculated from the Alpern-Boll Academic Age by dividing the Academic Age score in months by the child's chronological age in months. When this computation was made the pre-test IQ for treatment children was 94.44 and the pre-test IQ for the comparison group was 86.52. At the time of post-testing the IQ of the treatment group was 106.00 and the IQ of the comparison group was 89.8.

All the scores on the Developmental Profile showed the same pattern: the treatment group had a slightly higher score at the time of pre-testing, and the treatment group maintained or increased this edge at the time of post-testing.

Diet History

The figures in Table 3 show the pre- to post-treatment change in diet history scores for treatment and comparison subjects.

Table 3. Mean Diet History Scores for Treatment and Comparison Subjects Before and After the Treatment Interval

	XDH	YDH
Treatment	58.00	61.88
Comparison	62.19	54.00

NOTE: Highest Possible Score = 100
X = Pre-treatment Score
Y = Post-treatment Score

In the case of the diet history scores the treatment group began with a slightly lower score than the comparison group, but after treatment the positions were reversed: the comparison group actually obtained a lower score at post-testing while the score for the treatment group was higher.

OTT/Interview

The scores recorded in Table 4 indicate pre- and post-treatment differences between treatment and comparison groups on the five scale scores and total score for the Observation of Teaching Task/Interview which was designed to assess parenting skills. With two exceptions the treatment group had the higher mean score initially. Following the six month intervention period all mean differences favored the treatment group. Except in the case of the 'Behavior Management' scale the treatment group showed larger gains over the six month period than did the comparison group.

Table 4. Mean Pre- and Post-Treatment Total Scores on OTT/Interview Scales and Total for Treatment and Comparison Subjects

	XPEN	YPEN	XBHM	YBHM	XUOL	YUOL	XTS	YTS	XORG	YORG	XTOT	YTOT
Treatment	7.53	8.88	10.88	11.29	9.71	11.24	23.94	25.82	14.24	16.35	67.31	74.94
Comparison	7.95	8.25	10.55	11.10	9.80	10.15	21.05	22.40	13.75	15.20	62.48	66.38

NOTE: Highest Possible Total Score=88
X = Pre-treatment Score
Y = Post-treatment Score

PEN = Provision for Child's Emotional Needs
BHM = Behavior Management
UOL = Use of Language
TS = Teaching Style
ORG = Organization of Child's Environment
TOT = Total Score

Data Analyses

The analysis of covariance is a statistical technique which may be used when it is not possible to establish initially that treatment and comparison groups are equivalent with respect to relevant variables. In the CHDP study an attempt was made to balance the treatment and comparison groups with respect to chronological age and sex. However, it was not possible to equate the two groups on other important variables such as physical or academic age, education of parents, number of siblings, etc. Therefore, multivariate analysis of covariance (MANCOVA) was used in several instances to adjust post-treatment means for pre-treatment differences in performance. The .05 level was chosen as the criterion for significance in all statistical tests performed.

Developmental Profile

When post-treatment means for the five scales of the Alpern-Boll Developmental Profile (DP) were adjusted for initial differences between treatment and comparison groups on the scales, the multivariate F was significant ($F = 3.47$, $df = 5, 26$, $p < .02$), and the treatment group was found to have a higher mean Academic Age ($p < .00$) and a higher mean Communication Age ($p < .04$).

Table 5. Univariate Analyses of Variance for Treatment Group Differences on Five Developmental Profile Scales.

Variable	Mean Square	Univariate F	p
*Y Physical Age	20.76	.92	.34
Y Self-Help	11.26	.24	.62
Y Social Age	70.11	2.08	.16
Y Academic Age	240.12	12.02	.00
Y Communication Age	100.42	4.80	.04

*Y=Post-treatment score

In order to determine whether the pre-post differences on the Developmental Profile which favored the treatment group were actually due to the treatment or to some differences between the groups on socio-economic variables, a regression analysis was performed with the five subtest scores of the DP as dependent variables and seven socio-economic variables as independent variables. This analysis showed that the DP scores could not be predicted from the variables of sex, income level, participation in the WIC program, number of older siblings, number of younger siblings, the education of the mother, or the presence of the father in the home ($F = 1.22$, $df = 35, 108$, $p < .22$). Taken together, this group of demographic variables accounted for only 23 percent of the variance in the DP scores.

Another regression analysis was employed to test the relationship between a second set of demographic variables and Developmental Profile scores. This time the dependent variables included sex, income level, WIC participation, age, mother's level of education, father present or absent, number of older children in the household, number of younger children in the household, and birth order. There was an association between the dependent and independent variables ($F = 2.16$, $df = 45, 106$, $p < .00$), and the demographic variables were shown to account for 36 percent of the variance in DP scores. The variable of age made the primary contribution to the predictive ability of the regression model.

Several regression analyses were performed in an attempt to identify the precise relationship between age and DP scores. When age was used as the independent variable and gain scores for the five DP scales constituted the dependent variables, age was shown to have no overall predictive power for such scores either for the treatment group or for the comparison group. When a MANCOVA was computed with treatment as the independent variable, the DP gain scores as dependent variables, and age as a covariate, there were differences between the treatment and comparison groups on the Physical Age scale. Apparently there was a relationship between chronological age and Physical Age scores regardless of the treatment which was applied.

A MANCOVA was performed to assess the differences between the scores of males and females on the Developmental Profile. In this analysis treatment differences again were detected ($F = 3.31$, $df = 5, 24$, $p < .02$), but there were no sex differences ($F = 2.24$, $df = 5, 24$, $p < .08$). There was not a significant interaction ($F = .92$, $df = 5, 24$, $p < .49$) between sex and treatment, i.e., the treatment was not more effective with girls than with boys, or vice versa.

Diet History

When the post-treatment mean diet history scores were adjusted for pre-treatment differences between treatment and comparison groups, the treatment group was found to have a higher mean score ($F = 4.38$, 1 df, $p < .04$).

Observation of Teaching Task/Interview

Using an analysis of covariance design to adjust post-treatment total score means on the Observation of Teaching Task and accompanying parent interview for pre-treatment differences, the difference in means was found to favor the treatment group ($F = 5.29$, 1 df, $p < .03$). However, the MANCOVA involving scores for individual scales within this form (Provision for Emotional Needs, Behavior Management, Use of Language, Teaching Style and Organization of Environment) yielded a multivariate F which was not significant ($F = 1.27$, $df = 5, 26$ $p < .30$). Post-test means on the Teaching Style scale showed a difference which favored the treatment group ($p < .03$), but the nonsignificant multivariate F makes the importance of this difference questionable.

Table 6. Univariate Analyses of Variance for Treatment Group Differences on OTT Scales.

Variable	Mean Square	Univariate F	p
*Y Provision for Child's Emotional Needs	2.71	.70	.41
Y Behavior Management	.59	.11	.74
Y Use of Language	9.49	2.98	.09
Y Teaching Style	59.38	5.49	.03
Y Organization of Child's Environment	.54	.09	.76

*Y=Post-treatment score

A regression analysis was performed with the five scale scores of the OTT/Interview as dependent variables and seven socio-economic variables as independent variables. This analysis showed that there was no association between the five scale scores and the variables of sex, income level, participation in the WIC

program, number of older siblings, number of younger siblings, the education of the mother, or the presence of the father in the home ($F = 1.30$, $df = 35, 108$, $p < .15$). This group of demographic variables accounted for just 24 percent of the variance in OTT/Interview scores.

A second regression analysis was performed to test the relationship between OTT/Interview scale scores and sex, income level, WIC participation, age, mother's level of education, father present or absent, number of older children in the household, number of younger children in the household, and birth order. Again there was no association ($F = 1.45$, $df = 45, 106$, $p < .06$) between the five scale scores and the independent variables.

The OTT/Interview was found to have an acceptable degree of reliability. The reliability coefficient (Cronbach α) indicating the degree of internal consistency for the total scale during pre-treatment use was .92, and during post-treatment use .90. Thus the average of all coefficients of correlation between individual item ratings and total ratings on this instrument was .90 or above.

"Teaching Style" had the highest degree of internal consistency of all the scales of the OTT (pre-treatment $\alpha = .86$, post-treatment $\alpha = .80$). The scale "Provision for Emotional Needs" also had an acceptable degree of reliability (pre-treatment $\alpha = .88$, post-treatment $\alpha = .74$).

Internal consistency was somewhat questionable for the scales "Organization of the Child's Environment" (pre-treatment $\alpha = .69$, post-treatment $\alpha = .72$), "Use of Language" (pre-treatment $\alpha = .73$, post-treatment $\alpha = .61$), and "Behavior Management" (pre-treatment $\alpha = .65$, post-treatment $\alpha = .59$).

Variability in agreement between raters using the OTT/Interview was noteworthy.

Table 7 shows pre- and post-treatment coefficients of correlation (or extent of agreement) between the two members of each of the three Evaluation Teams on scale totals and grand total of the OTT/Interview.

Interpretation of Data Analyses

Developmental Profile

The significant multivariate F obtained in the MANCOVA involving the five Developmental Profile (DP) post-test scores as dependent variables and pre-test scores as covariates indicates that the CHDP intervention was successful in producing greater increases in those scores for the treatment group. The specific scores which showed significant differences were Academic Age (from which an IQ score may be derived) and Communication Age. Thus treatment was most effective in increasing cognitive skills.

Regression analyses which tested the effects of various demographic variables on the post-test scores strengthened the conclusion that the CHDP "treatment" was the factor most responsible for the increases in treatment group scores. There was no association between scores on the DP scales and the variables of sex, income level, participation in the WIC program, number

Table 7. Pre- and Post-Treatment Coefficients of Correlation Showing Inter-Rater Agreement for the Two Members of Three Teams on Scale Totals and Grand Total of the OTT/Interview

Scale	Team 1	Team 2	Team 3
	Pre-treatment		
Provision for Child's Emotional Needs	.07	.98	.93
Behavior Management	.85	.97	.64
Use of Language	.56	.86	.84
Teaching Style	.60	.97	.81
Organization of the Child's Environment	.97	1.00	.95
TOTAL	.68	.99	.91
	Post-treatment		
Provision for Child's Emotional Needs	.49	.96	.39
Behavior Management	.61	1.00	.86
Use of Language	.51	1.00	.83
Teaching Style	.56	.97	.73
Organization of the Child's Environment	.97	1.00	.89
TOTAL	.74	.99	.91

of older siblings, number of younger siblings, education of the mother, presence of father in the home, number of older children in the household, number of younger children in the household, or birth order.

Age was the only demographic variable found to have an effect on DP scores, and the only discernible effect of age was on Physical Age scores. The data suggest that older children in the treatment group could be expected to make higher Physical Age scores regardless of the treatment.

Diet History

The ANCOVA which adjusted post-treatment mean diet history scores for pre-treatment differences among treatment and comparison subjects showed that after the CHDP intervention the treatment children were eating more nutritious meals than their peers in the comparison group.

OTT/Interview

Total mean post-test scores on the "Observation of Teaching Task"/Interview instrument were higher for the treatment group than for the comparison group when adjusted for pre-treatment differences between the two groups. This suggests that the CHDP intervention was successful in changing parent behavior and improving parent-child interaction, at least with respect to the kinds of behavior specified in this instrument. However, the fact that there were no differences between treatment and comparison groups on the individual scales of the OTT/Interview (multivariate F nonsignificant) suggests that technical defects in this instrument may make it of doubtful value in assessing parenting skills.

The Teaching Style scale had the highest degree of internal consistency of the five scales (pre-treatment α = .88, post-treatment α = .74). The MANCOVA also suggested that Teaching Style was the only scale which showed pre-post differences between the treatment group and the comparison group. Evaluation Teams 2 and 3 achieved an acceptable degree of agreement between raters on the Teaching Style scale. Thus Teaching Style appears to be the most reliable, and perhaps also the most valid, scale contained in the OTT/Interview.

The scale 'Provision for Emotional Needs' had an acceptable level of internal consistency (pre-α = .88, post-α = .74), but only one Evaluation Team achieved acceptable inter-rater reliability coefficients for pre-testing and post-testing.

Inter-rater agreement was highest for all Evaluation Teams on the scale 'Organization of the Child's Environment', but internal consistency was not acceptable (pre-α = .69, post-α = .72).

Since it is difficult to achieve significant mean differences between treatment and comparison groups using an unreliable instrument, and since overall reliability for some of the scales that make up the OTT/Interview is doubtful, it is not possible to say whether the intervention really produced a difference between the parenting skills of mothers of treatment subjects and parenting skills of comparison mothers. The intervention may indeed have made a difference, but due to the unreliability of the instrument this cannot be said unequivocally.

Conclusions Based on Treatment-Comparison Group Study

Measures of Development

The CHDP intervention was apparently successful in increasing cognitive skills as measured by the Academic Age and Communication Age scales of the Alpern-Boll Developmental Profile (DP). However, after six months of the CHDP intervention scores for treatment subjects on the Physical Age, Self-Help Age and Social Age scales of the Developmental Profile were not significantly greater than scores of the comparison group in these areas following the same six-month period. The question could be asked, "Did the intervention fail to have an effect on physical, self-help, and social development, or was the failure to attain statistical significance in these areas due to technical defects in the instrument used to measure them?"

The Manual which describes the Developmental Profile (1972) contains virtually no information on the instrument's reliability--nothing about internal consistency, no item analyses, merely two investigations of scorer agreement admittedly carried out "with the pre-standardized version of the inventory" (p. 67). With regard to validity, the Manual states that correlation studies which might establish a relationship between scores on the Developmental Profile and scores on other instruments designed to measure similar areas of development have been carried out only for the Academic Age scale. (Apparently the correlation between Academic Age and the Binet Mental Age is approximately .84.) With such scanty information on the reliability and validity of most scales in the Developmental Profile there is reason to doubt that its scores provide an accurate measure of early development, except, perhaps, in the cognitive domain. Therefore, it is not possible to say, on the basis of scores obtained from the DP, that the CHDP was or was not successful in producing gains in physical, self-help, and social development. Resolution of these questions must await the selection (or development) of more accurate measures of early development in these areas than the Developmental Profile currently provides. If the CHDP staff believes it is important to promote development of its clients in these non-cognitive areas, then the staff, and its training group at the State level, should be actively engaged in the research required to obtain such measures.

Dietary Practices

The diet history scores of children in the CHDP treatment group increased from 58 to 62 on a scale of 100 during the six months of intervention, while the scores of children in the comparison group actually declined from 62 to 54. While the mean difference favoring the treatment group was statistically significant, the post-treatment mean score for that group was not good enough to substantiate a claim that treatment group children were eating well-balanced meals after 6 months of intervention.

According to Parent Questionnaire responses, 76% of the parents of treatment subjects felt the CHDP program had increased their knowledge about foods needed for growth and maintenance of health. But only 41% said their families were eating more of these nutritious foods. Project records shed little light on the issue of family dietary practices: only seven (41%) sets of records contained notations that improvement in family diet was needed. (More such notations clearly should have been made since the pre-intervention mean diet history score of just 58 was not due to seven very low scores and

ten very high scores, but rather to a clustering of scores in the 50s and low 60s.) Just two records contained narrative evidence that family dietary practices had improved during the treatment period.

The CHDP intervention apparently had a positive impact on family dietary practices, but much more remains to be done in this area before Project supervisors can feel confident that their clients are eating well-balanced meals. Evidence of intervention in the area of nutrition is sketchy at best in Project records--either home visitors and the supervisors are not providing families with much information on nutrition, or they are providing it but not noting this in the records. Project supervisors should decide which of these explanations best describes the actual situation and then take steps to increase either the amount of nutrition information shared with Project families, or the documentation of this practice in Project records, or both.

Parenting Skills

While there are technical deficiencies in the Developmental Profile, there is at least some evidence that that instrument actually measures early development of cognitive skills. There seems to be no good evidence that parenting skills were accurately measured by the Observation of Teaching Task and Interview form employed by the evaluators. The 'Teaching Style' scale appeared to be the most reliable, and perhaps the most valid, of the five scales that comprised the instrument. But even that scale contained some items that did not correlate significantly with the total score. The best set of items, that is, the set having the highest level of internal consistency, should be identified; home visitors should receive intensive training in the use of this set of items; then one or two items at a time should be added and tested in an attempt to build an even more reliable measure of parenting skills.

EVALUATION OF THE MANAGEMENT COMPONENT

The evaluators added an overall management objective to the seven general CHDP objectives. In order to assess the effectiveness of Project management additional records were reviewed, an opinionaire was employed to measure team member morale, and a community survey was conducted.

Evidence from Project Records

Evidence from several sources indicates that the CHDP is utilizing all available referral agencies in recruiting clients. Unfortunately, however, funding limitations do not permit the CHDP teams to serve all needy clients. Each team member continually maintains a full case load, but there are more eligible families than can be served by the present staff.

The reputation of the Project and the recruiting procedures of the home visitors are sufficiently positive to assure that few families contacted about beginning the Project reject the offer of services. During 1978, when over 800 families were served by Project staff each month, only 99 families refused Project services.

Few parent groups have been conducted by the CHDP staff, and several sources of information point to a need for additional parent groups as a means of decreasing the social isolation of Project families.

Evidence from the Opinionaire for Team Members

The evaluators, with the assistance of the CHDP supervisory staff, adapted statements from the Purdue Teacher Opinionaire to form a 95-item instrument containing information in ten areas of team member morale. The Opinionaire was administered to all 37 CHDP team members employed at the seven Project sites in June 1978. Overall, team member morale was high: the mean of all responses was 3.08, a 'probably agree' response on a 4-point Likert scale (1-Disagree, 2=Probably Disagree, 3=Probably Agree, 4=Agree). Even on the factor with the lowest mean score (2.66), team members compiled a 'probably agree' response. In Table 8 the ten Opinionaire factors are listed in order from the factor having the highest mean score (the most favorable response) to the factor having the lowest mean score.

Table 8. Ten Factors from the Opinionaire for Team Members Ranked in Order from Highest to Lowest Mean Score

Rank	Factor	Mean
1	Rapport Among Team Members	3.46
2	Community Pressures	3.41
3	Education, Social, and Health Issues	3.24
4	Satisfaction with Position	3.17
5	Community Support of Project	3.04
6	Rapport with Supervisor and Supervisory Team	2.95
7	Project Resources and Services	2.84
8	Team Member Salary	2.79
9	Team Member Status	2.69
10	Team Member Workload	2.66

Home educators in the Project exhibited the most positive attitudes on Opinionaire items ($\bar{X}$ = 3.25), followed by the nurses ($\bar{X}$ = 3.113), the social workers ($\bar{X}$ = 3.111), and the secretaries ($\bar{X}$ = 2.76).

The fact that 'Rapport Among Team Members' was the factor with the highest mean score on the Opinionaire suggests that CHDP team members were quite satisfied with their use of a team approach to home-based early intervention.

In general, the team members did not feel that community pressures kept them from doing their best in their jobs, imposed unreasonable personal standards, or restricted their participation in nonprofessional activities.

With regard to the most negative factor, 'Team Member Workload', team members felt that required reports and paperwork took so much of their time that their clients were placed at a disadvantage. The item in the 'Team Member Status' factor which produced the most negative response ($\bar{X}$ = 2.17, a 'probably disagree' response) was "My position in this Project affords me the security I want in an occupation."

Evidence from Community Survey

A Community Survey instrument was designed by the evaluators to assess the attitudes toward the CHDP of a stratified random sample of citizens in the six counties where the Project had been in operation for at least a year. Responses were obtained from 176 citizens, 42 percent of the 422 persons to whom the Survey was mailed.

Sixty-one percent of the respondents said they had heard of the CHDP, and 55 percent of these had had first-hand experience with the staff and services provided. Eighty-three percent of the respondents with personal knowledge of the Project rated its services as good (53%) to excellent (30%).

Project staff and community agencies such as the health, welfare or mental health department were the most frequently mentioned sources of information about the CHDP.

Eighty-one percent of all respondents felt there was a need in their community for the types of services offered by the CHDP. Three-quarters of the respondents expressed willingness to have their tax dollars spent on such a Project. But only 23 percent felt that at least 75 percent of those eligible for the Project were actually being served by it. Persons who knew something about the CHDP were more likely to express favorable attitudes about its services and to favor support for it than were those who had never heard of the Project.

CONCLUSIONS AND RECOMMENDATIONS

Overall Conclusions

Within the limitations of time (all data to be obtained within nine months) and money imposed on this evaluation of the Child Health and Development Project, the overall evaluation objective of providing evidence of short-term effectiveness of the Project in meeting its seven stated goals was realized. This was accomplished only through the use of multiple data sources because no one source--Project records, the parenting skills assessments currently used by home visitors, treatment-comparison group study, or the measure of parent opinion--was found to possess sufficient consistency, sufficient reliability, to make a strong case for Project effectiveness when considered by itself.

Sponsors of the CHDP evaluation were principally interested in obtaining indications of the effectiveness of their particular home-based team approach to early childhood intervention. In a general way, these indications were provided by the evaluators. Unfortunately the time allotted did not permit this evaluation to contribute significantly to solution of the problem which current literature suggests is of most concern to early childhood specialists, namely, which combination of intervention strategies is most efficient in assisting each particular client group. A study which limits the data-gathering phase to nine months does not permit the sophistication of design that would be needed to tease out information about the effectiveness of particular strategies with particular client types.

Having acknowledged these limitations, the evaluators' general recommendations for future action on the part of CHDP management include:

1) working to improve the reliability of the data-gathering sources currently being used by Project staff,

2) adding a very limited number of new data-gathering instruments, and

3) undertaking a longer term (continuous, if possible) external evaluation that would permit the use of case studies and collection of longitudinal data to provide evidence regarding the effect of certain intervention strategies with particular types of clients.

Recommendations Based on Review of Project Records

The evaluators base the following recommendations on their review of Project records.

(1) Project records should include more information on (a) family nutrition, (b) nutritional information supplied to each family by Project staff, and (c) any improvement in family diet which may have occurred as a result of this intervention.

In order to provide a more objective measure of improvement in family dietary practices than is currently available, periodic use of the diet history procedure employed in the evaluation should occur with each client, or at least with a sample of clients. Currently there is no way to tell how far the intervention program is capable of moving its families along the continuum from poor to good nutrition as evidenced in children's diets.

(2) Fewer than five percent of the records reviewed by the evaluators contained evidence of client delays on the Denver Developmental Screening Test. The Denver may be too gross a measure to provide the quality of developmental assessment needed to meet the goals of the CHDP. Certainly this instrument has minimal value as a tool for research or evaluation because it does not yield quantitative data for approximately 95 percent of the CHDP client population.

The Denver is not the only developmental screening device which paraprofessionals can be trained to use. Serious consideration should be given to substitution for the Denver, at least periodically (i.e., alternate the Denver with another instrument for all clients), a measure which could provide home visitors with more specific information about the development of their clients. As a first step in this direction, the Academic Age and Communication Age scales of the Alpern-Boll Developmental Profile might be tried. The evaluators found much interest among home visitors in hearing how their clients performed on the Developmental Profile when this was administered in the course of the treatment-comparison group study.

Recommendations Based on Study of Parent Opinion Concerning the CHDP

The evaluators strongly recommend that CHDP staff add to their data-gathering instruments a periodic measure of parent opinion such as the Parent Questionnaire

developed for the evaluation. Parent opinion should be solicited soon after the initiation of Project services as part of an effort to detect incipient problems in the relationship with a new client family before these problems cause the family to reject further services.

During the first three or four months of Project services someone other than the assigned home visitor (another visitor from the same team, the Project secretary during a clinic visit, or a supervisor during a home visit) should interview the parent to determine:

1) how the client family is responding to the home visitor and her/his method of delivering services, and

2) what aspect(s) of Project services the family finds most inconvenient, disruptive, or objectionable.

Later in the period of service to a given family, a measure of parent opinion could add information which is not currently well documented in Project records concerning:

1) the extent to which parents

   a) become involved in home visits,

   b) learn to teach the child the lesson suggested by the home visitor,

   c) follow through with the teaching after the visitor leaves, and

   d) actually improve the quality of their interactions with their children as a result of Project intervention.

2) the extent to which Project services decrease the social isolation of client families.

Fewer than half of the parents interviewed during the evaluation said they knew 'many of the other children and parents' in the Project. There seemed to be some interest in parent discussion groups and/or field trips. As a means of promoting social integration on the part of Project families the evaluators recommend that parents who volunteer to do so be brought together in small groups on a regular basis to discuss common concerns. A play group for Project children should be conducted simultaneously with the parent meetings.

Recommendations Based on the Opinionaire for Team Members

In general, the morale among team members at the seven CHDP sites was quite good. The fact that 'Rapport Among Team Members' was the Opinionaire factor with the highest mean rating indicates that Project staff at each site respected each other, enjoyed their opportunity to work as a team, and supported the team concept on which the CHDP is based.

However, there seems to be room for improvement in team members' satisfaction with their positions. A substantial number said they experienced "stress and strain" in their work, that they did not feel they could make their 'greatest

contribution to society' in their position, and that they would change jobs if they could earn as much money in another occupation. The supervisory staff, through praise for individuals and information provided in groups, could increase team members' feelings of self-worth, accomplishment, and occupational satisfaction.

The use of ethical procedures, not merely political patronage, must be employed in the appointment and reappointment of team members. Politically dictated appointments of persons without the training, experience, and competence required of a CHDP team member seem to have caused as much frustration and job dissatisfaction among staff members as any other single factor.

Community awareness and support must be solicited for the Project in those counties where the services have most recently been implemented.

Most team members found the time spent in record keeping excessive. Members might be encouraged to dictate their reports as a time-saving mechanism.

Recommendations Based on the Community Survey

Citizens in five counties served by the CHDP who responded to the Community Survey expressed favorable attitudes toward the need for services such as those the Project provided and toward the idea of having tax dollars spent on the Project. However, a majority of the citizens responded negatively when asked if they thought 75 percent of those eligible for the Project were being served by it. Survey results suggest the following recommendations:

1) The CHDP staff should continue to utilize team members and health/welfare agencies as sources for informing the public about the services provided by the CHDP. These appeared to be the most effective informational sources; however, other sources, especially newspapers and radio, should also be used to reach a larger proportion of the community.

2) The staff at each Project site should publicize, if possible, estimates of the number of clients they serve in comparison with the number in their area who need the services.

3) Attempts should be made to establish better coordination, and less duplication of services, with other agencies performing functions similar to those of the CHDP. In instances where the duplication of services is a perceived and not an actual duplication, this distinction should be made clear to the community. A series of articles in the local newspaper describing the functions of the agencies and highlighting differences could be a means of achieving this end.

4) Take advantage of the support for the Project which was expressed by citizen-respondents in efforts to:

   a) increase the number of team members so that more of the children and families who need the services could be included in the program.

   b) decrease the heavy workload of team members by hiring more qualified persons regardless of political connections.

c) serve other children in the families currently involved, or families above the income restrictions who could benefit from the services.

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